

\**R. CAROLINIENSIS*, var. *NANELLA*, forma *ECILIATA* Fernald, l. c. 80, t. 870, figs. 2-4 (1945).—Cited from SOUTHAMPTON and SUSSEX Cos.

\**R. CAROLINIENSIS*, var. *CHELONIFORMIS* Fernald, l. c. 80, tt. 871 and 872 (1945).—Recorded from CLARKE, NORTHAMPTON, GLOUCESTER, ELIZABETH CITY, JAMES CITY, PRINCESS ANNE, NORFOLK, DINWIDDIE, MECKLENBURG and HALIFAX Cos.

\**R. CAROLINIENSIS*, var. *CHELONIFORMIS*, forma ***candida***, f. nov., corollis albidis.—Brunswick Co., VIRGINIA: Triplett, 1945, *J. B. Lewis* (TYPE in Herb. Gray.).

\**R. CAROLINIENSIS*, var. *DENTATA* (Nees) Fernald, l. c. 83, tt. 874 and 875 (1945).—Cited from FAIRFAX, JAMES CITY, HENRICO, PRINCESS ANNE, NORFOLK, ISLE OF WIGHT, SUSSEX, HALIFAX and ORANGE Cos.

(To be continued)

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## NOTES ON THE COMPOSITAE OF THE NORTHEASTERN UNITED STATES. I. INULEAE

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IN the course of preparing a treatment of the *Compositae* for the new illustrated flora of the northeastern states, it becomes necessary to make a number of new combinations. These, with such comments as may seem desirable, will be published in advance. It is intended that automatic tautonyms, without citation, be used in the flora for nomenclaturally typical intraspecific units. Such of these as do not conflict with previously published names of the *typica* category will be validated in this series of papers.

In this work, as in previous work with certain western and southern groups, it is noteworthy how often I have been forced to return to a treatment approximating that of Asa Gray in the *Synoptical Flora*. In several instances in which the past 60 years have seen a marked increase in the number of generally accepted species, I have been unable to recognize or delimit satisfactorily the major part of the recent segregates. Such a case is furnished by *Antennaria*. Gray disposed of all our *Antennarias* as one variable species, *A. plantaginifolia*. Experience has shown this treatment to be too conservative, but even so it is more satisfactory than the treatments now in vogue. The chaotic condition which has been brought about in some Euro-



pean genera that also show well-developed apomixis, such as *Hieracium*, should give pause to those who have so multiplied our species. As Stebbins has shown (Bot. Gaz. **94**: 134–151. 1932; RHODORA **37**: 236. 1935), the sexual forms of the large-leaved and small-leaved eastern *Antennarias* hybridize, but the offspring show cytological irregularities and reduced fertility. These two groups thus behave about as we would expect two closely related but distinct species to do. Our plants may be segregated fairly readily into large-leaved and small-leaved forms (*A. plantaginifolia* and *A. neglecta*), although with some overlapping. The further segregation from *A. plantaginifolia* of the single-headed southern plant with certain habital peculiarities, *A. solitaria*, leaves us with three fairly well-marked species. The first two of these are highly variable, and may be separated into more or less evident varieties, although the distinctions sometimes become entirely arbitrary. I do not deny that some of these varieties may seem distinct in restricted areas, but when the whole region is considered the segregation becomes too dependent on temporary whim, or at best on individual opinion, to justify specific recognition. This should cause no surprise, since Fernald has pointed out (RHODORA **38**: 231. 1936) that certain groups which are largely apomictic in some areas are frequently sexual in others.

ANTENNARIA PLANTAGINIFOLIA (L.) Richards. var. **plantaginifolia** Cronquist, nom. nov. *A. plantaginifolia* (L.) Richards. App. Frank. Journ. ed. **2**. 30. 1823. *Gnaphalium plantaginifolium* L. Sp. Pl. 850. 1753, sens. strict. Basal leaves tardily glabrate above; pistillate involucres mostly 5–7 mm. high.

A. PLANTAGINIFOLIA (L.) Richards. var. **ambigens** (Greene) Cronquist, comb. nov. *A. arnoglossa* Greene var. *ambigens* Greene, Pitt. **3**: 320. 1898. *A. fallax* Greene, Pitt. **3**: 321. 1898. Basal leaves tardily glabrate above; pistillate involucres mostly 7–10 mm. high.

A. PLANTAGINIFOLIA (L.) Richards. var. **arnoglossa** (Greene) Cronquist, comb. nov. *A. arnoglossa* Greene, Pitt. **3**: 318. 1898. *A. Parlinii* Fern. Gard. & For. **10**: 284. 1897. *A. Parlinii* var. *arnoglossa* Fern. Proc. Bost. Soc. Nat. Hist. **28**: 243. 1898. Basal leaves glabrous above nearly or quite from the first; pistillate involucres mostly 7–10 mm. high.

A. NEGLECTA Greene var. **neglecta** Cronquist, nom. nov. *A. neglecta* Greene, Pitt. **3**: 173. 1897, sens. strict. Basal leaves tardily glabrate above; stolons long, procumbent, with small and



often few leaves; basal leaf-blades tending to taper gradually to the base; pistillate involucre mostly 7–10 mm. high.

*A. NEGLECTA* Greene var. **Randii** (Fern.) Cronquist, comb. nov. *A. canadensis* Greene var. *Randii* Fern. Proc. Bost. Soc. Nat. Hist. **28**: 247. 1898. *A. canadensis* Greene, Pitt. **3**: 275. 1898. Basal leaves glabrous above nearly or quite from the first; leaves and stolons variable; pistillate involucre mostly 7–9 mm. high.

*A. NEGLECTA* Greene var. **attenuata** (Fern.) Cronquist, comb. nov. *A. neodioica* Greene var. *attenuata* Fern. Proc. Bost. Soc. Nat. Hist. **28**: 245. 1898. *A. neodioica* Greene, Pitt. **3**: 184. 1897. Basal leaves tardily glabrate above; pistillate involucre mostly 7–10 mm. high; stolons relatively short and leafy, merely decumbent; basal leaf-blades tending to be abruptly contracted to the petiole-like base.

*A. NEGLECTA* Greene var. **gaspensis** (Fern.) Cronquist, comb. nov. *A. neodioica* Greene var. *gaspensis* Fern. Ottawa Nat. **19**: 156. 1905. Similar to var. *attenuata*, but the leaves much smaller, not over 5 mm. wide, and generally narrower in shape.

*A. NEGLECTA* Greene var. **argillicola** (Stebbins) Cronquist, comb. nov. *A. virginica* Stebbins var. *argillicola* Stebbins, RHODORA **37**: 232. 1935. *A. virginica* Stebbins, RHODORA **37**: 230. 1935. Similar to var. *attenuata*, but smaller in all parts, the pistillate involucre mostly 5–7 mm. high.

All of the varieties of the two preceding species, as I have delimited them, occur nearly or quite throughout our range, except for var. *gaspensis* and var. *argillicola*. The former is limited to the Gaspé region, the latter to the mountains of Virginia and adjacent areas. It is to be understood that the *Antennarias* of Newfoundland are excluded from consideration in the foregoing discussion.

*PLUCHEA PURPURASCENS* (Sw.) DC. var. **purpurascens** Cronquist, nom. nov. *P. purpurascens* (Sw.) DC. Prodr. **5**: 452. 1836, sens. strict.

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